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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/701,496

**Applicant(s)**

TOSAKI ET AL.

**Examiner**

ANISH DESAI

**Art Unit**

1794

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

#### **DETAILED ACTION**

1. Applicant's arguments in response to the Office action dated 02/04/08 have been fully considered.
2. Claims 1-7 are pending.
3. The 35 USC Section 112-second paragraph rejections are withdrawn in view of the present amendment and response. However, upon further consideration a new 35 USC Section 112-second paragraph rejections are made.
4. The 35 USC Section 103(a) rejections based on Coopridier et al. (US 5,571,617) are withdrawn because Coopridier's hydrophilic polymer (stabilizer) is reacted with the acrylic polymer (A) whereas, the presently claimed invention requires that the hydrophilic polymer is not reacted with the acrylic polymer. The Examiner notes that during a phone interview with Applicant's attorney Mr. Michael Raucci on 12/04/08, Mr. Raucci confirmed that the hydrophilic polymer in Applicant's PSA is not reacted with the acrylic polymer.
5. The 35 USC Section 102(a)/103(a) rejections based on Tosaki et al. (EP 1340797A2) are moot because Tosaki was published on September 3, 2008 which is after the priority date of November 8, 2002 for the present invention. Additionally, Applicant has provided a certified English translation of his/he foreign priority document JP 2002-324967 (filing date of November 8, 2002).
6. The 35 USC Section 103(a) rejections based on Michio et al. (EP 0661302A1) in view of Tran et al. (US 6,103,316) are withdrawn, because neither Michio nor Tran disclose a PSA comprising a blend comprising acrylic polymer (A), emulsifier (B), and

hydrophilic polymer (C). Further, Michio at page 4 lines 1-5 discloses emulsifier that is copolymerized with the acrylic polymer.

7. A new 35 USC Section 103(a) rejections based on Lucast et al. (WO00/78884) in view of Coopridet et al. (US 5,571,617), and further as evidenced by Istvan Benedek and Luck J. Heymans (*Pressure-Sensitive Adhesive Technology*, Marcel Dekker Inc., Chapter 8, page 412, 1997). US 6,518,343 B1 to Lucast et al. is relied upon as an equivalent document for WO00/78884.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
9. Claims 1 and 6 recite "aqueous dispersion type pressure-sensitive adhesive", the recitation such as "type" are vague and indefinite, because it is not clear as to what is meant by "aqueous-dispersion type pressure-sensitive adhesive". As such the Examiner suggests deletion of "type". Further, it is not clear whether Applicant is intending to claim a dry adhesive or wet adhesive in the Final product, because claim recites "aqueous dispersion type pressure-sensitive adhesive". It is noted that the specification discloses of drying of PSA after applying onto a substrate (see Examples

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in Applicant's specification as originally filled). The Examiner is interpreting PSA of the claimed invention is dry.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lucast et al. (WO00/78884) in view of Coopridner et al. (US 5,571,617), and further as evidenced by Istvan Benedek and Luck J. Heymans (*Pressure-Sensitive Adhesive Technology*, Marcel Dekker Inc., Chapter 8, page 412, 1997). US 6,518,343 B1 to Lucast et al. is relied upon as an equivalent document for WO00/78884.

11. With regards to claim requirement of concentration of the surfactant in a surface portion of the PSA layer within the range of up to 3 nm inward from the outer face of the PSA layer being 0.1 to 3 parts by weight, it is respectfully submitted that the claim language is open to the presence of a surfactant in the entire PSA layer. The claim language does not require concentration gradient of surfactant in the PSA. Therefore, a PSA layer having weight% of surfactant as claimed by Applicant can be interpreted to meet Applicant's claimed requirement of "in a surface portion of the pressure-sensitive adhesive layer within the range of up to 3 nm inward from the outer face of the pressure-sensitive adhesive layer...sulfur atom is contained in a proportion of from 0.1

to 3 parts by weight based on 100 parts by weight of the whole of the monomer components constituting the acrylic polymer (A) that forms the surface portion of the pressure-sensitive adhesive layer".

12. Lucast discloses a wet-stick pressure-sensitive adhesive tape, wherein the PSA can be adhered to both wet and dry surfaces (abstract and column 3 lines 5-15). With respect to Applicant's claimed acrylic polymer (A) the disclosure of Lucast at column 4 lines 40-68 beginning at "(Meth)acrylate monomers" meets Applicant's acrylic polymer (A). With respect to Applicant's claimed hydrophilic polymer (C), the disclosure of Lucast at column 6 lines 5-20 and lines 60-65 beginning at "Nonreactive poly(alkylene oxide) copolymers" meets Applicant's claimed hydrophilic polymer (C). Moreover, the polyalkylene oxide of Lucast reads on Applicant's claimed polyalkylene glycol hydrophilic polymer. Additionally, at column 7 lines 55-65, Lucast discloses that the poly(alkylene oxide) copolymer can be used in an amount of at least about 9 percent by weight based on the total weight of the adhesive composition. This disclosure of Lucast meets Applicant's claimed requirement of at least one hydrophilic polymer selected from polyalkylene glycol in a proportion of from 0.5 to 15 parts by weight based on 100 parts by weight of non-volatile matters in the aqueous dispersion type pressure-sensitive adhesive composition of the whole of the PSA layer.

13. Regarding claim 1, Lucast is silent as to teaching "in a surface portion of the pressure-sensitive adhesive layer within the range of up to 3 nm inward...0.1 to 3 parts by weight based on 100 parts by weight of the whole of the...constituting acrylic polymer (A) that forms the surface portion of the pressure-sensitive adhesive layer".

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14. However, Cooprider discloses a coated sheet material comprising a backing and a coating of repositionable PSA (abstract). Further, aqueous dispersion based PSA of Cooprider comprises (A) plurality of polymeric, solid elastomeric microspheres that are reaction product of reactants comprising at least one C4-C14 alkyl (meth)acrylate monomer and at least one comonomer (acrylic polymer containing a (meth)acrylic acid C4-C12 alkyl ester) (column 1 lines 45-56 and column 4 lines 1-65), (B) anionic surfactant (emulsifier) containing sulfur atom (e.g. sodium lauryl sulfate at column 6 line 39). Moreover, at column 1 lines 60-67, Cooprider discloses addition of surfactant in an amount no greater than about 5 parts by weight per 100 parts by weight of [acrylic] microspheres, preferably about no greater than 3 parts by weight and most preferably in the range of 0.1 to about 1.5 parts by weight per 100 parts by weight of the [acrylic] microspheres.

15. It is noted that the primary reference of Lucast discloses PSA tape that is formed of acrylic based PSA. The secondary reference of Cooprider discloses PSA that is formed of acrylic adhesive, and further Cooprider disclose addition of surfactants such as anionic surfactant (e.g. Applicant's sodium lauryl sulfate) in the amount as contemplated by Applicant (see column 6 lines 30-40 and Example 1).

***Evidence Reference Istvan Benedek and Luc J. Heymans (Pressure-Sensitive Adhesive Technology, Marcel Dekker Inc., Chapter 8, page 412, 1997)***

16. The aforementioned evidence reference is relied upon to show that virtually for all uses of PSAs the surface energy of the adhesive is much lower than that of the adherent, which is a condition for good wetting. In order to improve the coating

properties (i.e. wetout) of PSA, surfactants are added to the formulation (see page 412 provided by the Examiner).

17. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add the anionic surfactant such as sodium lauryl sulfate in the amount as taught by Coopridier in the PSA of Lucast, motivated by the desire to improve the coating properties (i.e. wetout) of the PSA of Lucast such that it can be applied to a substrate surface.

18. As to the claimed requirement of the concentration of the anionic emulsifier within the range of up to 3 nm inward from the outer face of the PSA layer in proportion of from 0.1 to 3 parts by weight based on 100 parts by weight of the whole monomer constituting the acrylic polymer (A) and the ration of sulfur element by the ESCA measurement is less than 1 atomic%, it is reasonable to presume that said feature is present in the invention of Lucast as modified by Coopridier.

19. The support for said presumption is based on the fact that the PSA of Lucast as modified by Coopridier comprises a PSA having anionic surfactant in the amount as claimed by Applicant (see Examiner's reasoning above). Further, as previously noted claim language is open to the presence of a surfactant in the entire PSA layer. The claim language does not require concentration gradient of surfactant in the PSA. Therefore, a prior art PSA layer having the weight% of surfactant as claimed by Applicant can be interpreted to meet Applicant's claimed requirement of "in a surface portion of the pressure-sensitive adhesive layer within the range of up to 3 nm inward from the outer face of the pressure-sensitive adhesive layer...sulfur atom is contained in



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a proportion of from 0.1 to 3 parts by weight based on 100 parts by weight of the whole of the monomer components constituting the acrylic polymer (A) that forms the surface portion of the pressure-sensitive adhesive layer".

20. It is respectfully submitted that based on above facts, the PSAs of Applicant and that of Lucast as modified by Cooprider are similar in composition. Thus, the aforementioned feature would be present in the invention of Lucast as modified by Cooprider.

21. With respect to claim limitation of "wherein the hydrophilic polymer is added as an aqueous solution after the polymerization of the acrylic polymer", it is noted that said limitation is a product by process limitation. Product by process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. "Even though product by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product by process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir.1985).

22. It is respectfully submitted that by adding the hydrophilic polymer after the polymerization of acrylic polymer, Applicant's hydrophilic polymer does not interfere with the polymerization of acrylic polymer (see 0057 Applicant's US Patent Application Publication 2004/0091689A1) such that the hydrophilic polymer is not reacted with the acrylic polymer in Applicant's PSA tape. It is noted that Lucast's hydrophilic

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poly(alkylene oxide) copolymer [i.e. polyalkylene glycol] (Lucast refers to it as nonreactive copolymer) is nonreactive such that it does not interfere with the polymerization of [acrylic] monomers (see column 6 lines 5-25). Thus, in the PSA of Lucast, the hydrophilic polymer is not reacted with the acrylic polymer. Therefore, the Examiner sees no structural difference between Applicant's PSA and that of Lucast.

23. With respect to claim 5, it is respectfully submitted that the recitation of "multilayered" PSA does not require that each PSA layer of the "multilayered" PSA be separate and distinguishable from each other, and the claim language does not preclude the presence of the anionic emulsifier (B) in other layers of the multilayered PSA. Thus, a single PSA layer of the prior art is interpreted as capable of reading on the "multilayered" PSA as presently claimed. Accordingly, as set forth previously the secondary reference of Coopridier discloses addition of surfactant in an amount no greater than about 5 parts by weight per 100 parts by weight of [acrylic] microspheres, preferably about no greater than 3 parts by weight and most preferably in the range of 0.1 to about 1.5 parts by weight per 100 parts by weight of the [acrylic] microspheres.

24. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add the anionic surfactant such as sodium lauryl sulfate in the amount as taught by Coopridier, in the PSA of Lucast, motivated by the desire to improve the coating properties (i.e. wetout) of the PSA of Lucast such that it can be easily applied to a substrate surface.

25. As to claim 7, it is noted that application of PSA tapes of Lucast is in the field of adhesive bandages (see column 11 lines 20-25). Thus, the Examiner respectfully

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submits that use of porous substrates (backings) is well known in adhesive bandages, motivated by the desire to provide breathability to the adhesive bandage.

***Response to Arguments***

26. Applicant's arguments received on 09/15/08 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

27. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANISH DESAI whose telephone number is (571)272-6467. The examiner can normally be reached on Monday-Friday, 8:00AM-4:30PM.

28. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

29. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/A. D./  
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